AMENDMENTS TO THE CLAIMS:

1-8 (Cancelled)

9. (Currently Amended) A system for controlling exposure dose in a lithographic exposure tool for exposing a photoresist material applied to semiconductor wafers, and a reticle develops images in the photoresist ~~maerial~~ material applied to the semiconductor wafers, and wherein the photoresist material is subject to batch changeover and the system operates with successive lot runs, including previous lot runs that were run prior in time and a current lot run that is currently being run, comprising:

10/16/04 ltw

means for adjusting said exposure dose as a function of resist sensitivity changes, further comprising;

a) means for calculating a batch factor that is an exposure dose ratio of current exposure dose performance to previous exposure dose performance by using historical data, comprising batch factors and optimum exposure doses from at least one previous lot run that was run prior in time to the ~~previous to a~~ current lot run;

b) said means for adjusting said exposure dose comprises means for calculating a value of said exposure dose based on said calculated batch factor whereby said exposure dose in said lithographic exposure tool is controlled.

10. (Currently Amended) The system for controlling exposure dose as claimed in Claim 9, wherein said means for adjusting said exposure dose uses ~~further comprises using~~ said optimum exposure doses from said historical data.

11. (Currently Amended) The system for controlling exposure dose as claimed in Claim 9, wherein:

f) means for calculating said value of said exposure dose based on said historical data and said calculated batch factor for said new lot run.

13. (Currently Amended) The system for controlling exposure dose as claimed in Claim 9, wherein:

a means for applying an aging factor, to compensate for an ambient temperature of said resist, ~~is applied~~ to said calculated batch factor to increase accuracy of said calculated batch factor;

~~said~~ means for applying said aging factor, to compensate for said ambient temperature of said resist, ~~is applied~~ to said value of said exposure dose to increase accuracy of said calculating a value of said exposure dose ~~value~~.

14. (Currently Amended) A computer program product comprising:

a computer usable medium having computer readable program code embodied therein for controlling exposure dose in a lithographic exposure tool for exposing a photoresist material applied to semiconductor wafers, and a reticle develops images in the photoresist ~~macrial~~ material applied to the semiconductor wafers, and wherein the photoresist material is subject to batch changeover and the system operates with successive lot runs including previous lot runs that were run prior in time and a current lot run that is currently being run, the computer readable program code in said computer program product comprising:

10/16/04 HN

a) first computer readable program code for causing the computer to calculate a batch factor that is an exposure dose ratio of current exposure dose performance to previous exposure dose performance by using historical data, comprising batch factors and optimum exposure doses from at least one previous lot run ~~previous to a~~ that was run prior in time to the current lot run;